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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/343,509	06/30/1999	YOSHIKI TAKABATAKE	0039-7268-2R	8009

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EXAMINER

FERRIS, DERRICK W

ART UNIT	PAPER NUMBER
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2663

DATE MAILED: 08/27/2002

7

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/343,509

Applicant(s)

TAKABATAKE ET AL.

Examiner

Derrick W. Ferris

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 June 1999.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All   b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

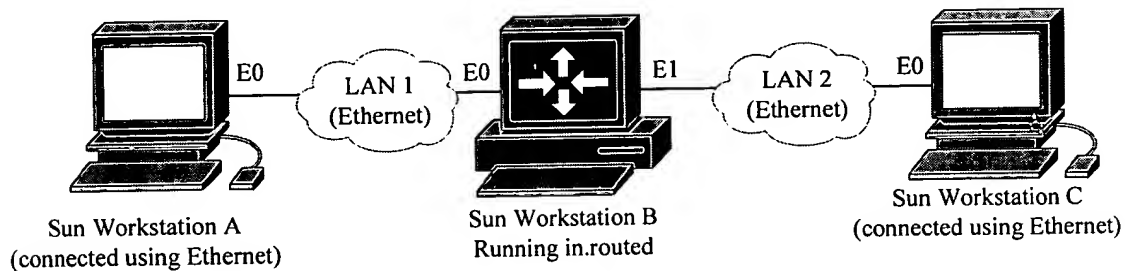
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1, 8, 16, and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Solaris Manual Pages for 'in.routed'.

*Applicant is reminded that examiner may make a broad but reasonable interpretation of the claims. The example below illustrates such a broad but reasonable interpretation. Hence, examiner recommends that applicant either narrows or clarifies the claimed subject matter with respect to their disclosed invention. Applicant is also strongly encouraged to read examiner's germane comments found in the conclusion first.*

*It is well known to a skilled artisan prior to applicant's invention that one node made be connected in such a way as to bridge two networks together. This communication node (or gateway node) further comprises functional units such that nodes in a first network may communicate with nodes a second network. By way of example, figure 1 illustrates this very point. Shown in figure 1 is a sun workstation B configured as a router such that a workstation A in network 1 (i.e., LAN 1) may communicate with a separate node (i.e., workstation C) in a different network (i.e., LAN 2). This is accomplished by running the in.routed daemon on workstation B containing two network interface cards (NIC), one for each network connected to an Ethernet*

*interface shown as E0 and E1 (i.e., a first interface unit and a second interface unit) as is known by a skilled artisan prior to applicant's invention. As defined by a router, networks are separated logically by their logical address or IP address.*



*Figure 1: Sun workstation configured as a router*

*Hence workstation B is able to recognize (i.e., it contains a recognition unit) one communication node (i.e., workstation A) on the first network as one of its "constituent elements" (since it has the same network address). Also disclosed in workstation B is a configuration information disclosure unit for letting workstation C know about workstation A. Examiner notes this can be accomplished many different ways, for example, using either an ARP query or a network service (e.g., NIS). In addition, a skilled artisan can furthermore execute various Solaris commands (i.e., applications) remotely for determining specific configurations of various nodes in either a first or second network (making the two networks seem transparent). Therefore it would have been obvious to a skilled artisan that given this very common configuration, that a workstation A in network 1 can communicate with a workstation C in a separate network via a communication node, workstation B, such that the interaction appears transparent to the end user. In other words, examiner notes no mention of an IEEE 1394 (i.e., firewire) network or bus disclosed in the claims such that the functionality as disclosed*

by the applicant in general would have been obvious to a skilled artisan given other types of networks and protocols such as using Ethernet operating on a bus topology as shown in figure 1.

3. **Claims 1-5,8-13,16-20 and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,219,697 to Lawande et al.

As to **claim 1 and 8**, disclosed by Lawande et al. is a method and apparatus for operating an IP protocol over a high-speed serial bus such as an IEEE 1394 high-speed bus [column 1, lines 22-25]. Hence other layers can operate on top of a 1394 physical and link layer 40 as shown in figure 5. For example, the Internet Protocol (IP) 152 can be used as well as a Bus Management Protocol (BMP) 156 [column 11, lines 27-55]. Shown in figure 2, there exists a motivation for showing one communication node (i.e., a routing device/edge server device) 34 connected to two separate networks, a LAN 24 and an IEEE 1394 network 40 over an IEEE 1394 bus [column 6, lines 10-41]. Each connection can be made using a network interface 24 (figure 3) using various physical interfaces in order to connect to various networks thus anticipating a first and second interface unit. Thus as disclosed by the reference, IP nodes on LAN 24 (e.g., SNMP management station 42 shown in figure 2) may communicate with the routing device/edge server 34 using IP where a translation is performed such that the routing device/edge server may communicate with IEEE 1394 nodes using 1394 addressing. As the IEEE 1394 nodes include a memory architecture instead of an IP address scheme to communicate, the network transfers the packets using addressed data writes over the 1394 network 40 [column 16, lines 41-67]. Also disclosed by Lawande et al. is a

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recognition unit for recognizing one connection node on the first network (network 40) as one of constituent elements in said communication node via the self identification phase 166 [column 13, lines 37-67]. Finally, also included is a configuration disclosure unit (located on root node as the manager of the network [column 14, lines 23-36]) for disclosing an own configuration information regarding the constituent elements as recognized by the recognition unit. Thus it would have been obvious to a skilled artisan to access this information using the lookup table that is used to map the IP addresses to the appropriate IEEE 1394 address [column 12, lines 11-27].

As to **claim 2**, Lawande et al. also teaches using sub constituent elements referred to in the reference as “suboperations” [column 6, lines 10-41]. (Examiner notes a very weak definition for a “sub constituent element” as provide by applicant on page 4 of the specification.)

As to **claim 3**, noted in the reference, ordinarily the router device 34 will contain the look-up table. Recall that the look-up table is used to transform an IP packet to an IEEE 1349 packet and visa versa, of which the encapsulation is shown in figure 7c. Hence the routing device (i.e., routing unit) has a detection unit used to identify the type of packet based on the protocol type field [column 17, lines 14-43]. Thus although not explicitly mentioned, a detection unit is used to determine the type of packet, where a message identifier attaching unit is used for attaching a message header if necessary (i.e., the Common Packet Header shown in figure 7c), such that a message identifier correspondence memory unit is the translation table used by the routing unit for routing the packet.

As to **claim 4**, as noted by the reference a resource acquisition unit can be used to for reserving a network resource by using the IP address in the table. This is stored in the resource information correspondence memory unit (i.e., the look-up table). Furthermore, it is noted that a unique network identifier (NID) is assigned to each node in addition to the IP address and 1394 address [column 14, lines 50-65]. Hence it would have been obvious to a skilled artisan to make a reservation based on the nodes address as broadly interpreted by the examiner.

As to **claim 5**, the reference also anticipates a node constituent elements information addition unit and a node constituent information deletion unit thus anticipating adding and removing nodes on the 1394 bus [column 14, lines 37-50].

As to **claim 9**, the type of node defined in the network depends on the address. For example the first network could be defined by an IP address while the second network could be defined by an IEEE 1349 address.

As to **claim 10**, as mentioned in the reasoning behind the rejection for claim 3, examiner notes a translation table corresponds to a configuration information correspondence memory unit which is used by a routing unit.

As to **claim 11**, see the reasoning behind the rejection for claim 3.

As to **claim 12**, see the reasoning behind the rejection for claim 4.

As to **claim 13**, see the reasoning behind the rejection for claim 5.

As to **claim 16**, in addition to the reasoning behind claim 1 for a first and second interface unit, a packet input/output unit is taught for going between IP and the IEEE 1349 protocol [column 12, lines 11-27]. Also shown in figure 5 is an application

interface information transfer unit such that the invention corresponds to the OSI model, such an application interface would be transparent to the end user (or communications node).

As to **claim 17**, see the reasoning behind the rejection for claim 3.

As to **claim 18**, see the reasoning behind the rejection for claim 4.

As to **claim 19**, in addition to the reasoning behind claim 1, an IEEE 1349 bus is presented as the second network. As noted using the reasoning behind the rejection for claim 2, a communication terminal function disclosure unit can be used for sub units (i.e., "suboperations").

As to **claim 20**, in addition to the reasoning for rejecting claim 6 for a configuration information notification unit and claim 7 for a configuration information reception unit, a configuration information memory unit can be anticipated by Lawande et al. who shows a translation table for storing part of the configuration information received by the configuration information reception unit.

As to **claim 22**, see the reasoning behind the rejection for claim 1 for an interface unit and a connection unit in general, claim 16 for an application execution interface where examiner notes that such an interface would have been obvious to a skilled artisan since the OSI layers are independent from both the IP layer and the IEEE 1349 layers (see Lawande et al. figure 5).

4. **Claims 6-7, 14-15, 21, 23, and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,219,697 to Lawande et al. in view of U.S. Patent No. 6,349,352 to Lea.



As to **claim 6**, not clearly disclosed by Lawande et al. are a configuration information notification unit and a configuration information reception unit. However, Lea provides both of these functional units. Lea presents a home audio/video network with both generic and parameterized device control. As such, Lea proposes a solution for communication between a number of components (i.e., communication nodes) over a bus in general such as an IEEE 1349 bus [Lea column 7, lines 25-33; column 9, lines 38-40]. Hence there exists a strong motivation to combine the subject matter of both of these references as a whole. Specifically, as shown in figure 13, Lea proposes a solution where certain nodes can query other nodes for detailed descriptions and based on the detailed descriptions provide certain functions on the other node [column 25, lines 47-61]. Hence taught by Lea is receiving from a communication node at least part of another configuration information regarding constituent elements on other communication node such that this information can be obtained over a different network should the node exist on a different network. Examiner points out that as broadly recited, a different network could be virtually anything. In addition, examiner points out that even if a first network is an IP network and a second network is an IEEE 1349 network the reference also discloses an IP node obtaining information from an IEEE 1349 node (e.g., a printer) [column 24, lines 3-14].

As to **claim 7**, examiner notes that similar reasoning can be applied using claim 6 where in claim 7 an exclusive node is designated by a specific address as mentioned by both references (e.g., an IEEE 1349 address).

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As to **claim 14**, see the reasoning behind the rejection for claim 6 with respect to a configuration information notification unit and for claim 7 with respect to a configuration information reception unit. Examiner notes it would have been obvious to combine both of these units for the purpose of making the rejection.

As to **claim 15**, see the reasoning behind the rejection for claim 7.

As to **claim 21**, Lea discloses a communication resource information reception unit, a communication resource memory unit, and a communication resource information transfer unit use the communications manager 750 shown in figure 7 [Lea column 10, lines 16-36; column 16, lines 30-36].

As to **claim 23**, see the reasoning behind the rejection for claim 7 for a configuration information reception unit and a configuration information notification unit. As shown in figure 6 of Lea, is a configuration information memory unit for storing at least part of the configuration information received by the configuration information reception unit such that it would have been obvious to use the memory presented in figure 6 for storing this information.

As to **claim 24**, see the reasoning behind the rejection for claim 21.

### ***Conclusion***

*Examiner notes in general that applicant attempts to claim the concept of one node communicating with another node through different or separate "networks" (e.g., not just limited to a specific bus specification such as IEEE 1349) via general or generic functions or units. In other words, applicant attempts to claim the genus of the species disclosed in the detailed description. Examiner is slightly surprised by this since applicant's disclosure*

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*proposed a solution to a specific problem relating to IEEE 1349 for a home wireless network [applicant's disclosure pages 2-3]. As such, the examiner has not read any limitations for the species invention into the claims, although notes at the same time that such broadly recited subject matter claimed by applicant opens up the door for a very broad but reasonable interpretation of the claims such as that presented in the first 35 U.S.C. 103 rejection presented herewith this Office action.*

*In addition, examiner notes that applicant essentially proposes two distinct inventions: one disclosed primarily in the first part of the summary and claims (i.e., the genus) and the other disclosed as six embodiments mentioned in the detailed description and in the second part of the summary (disclosed as applicant's "present invention" also identified in applicant's summary starting on page 15 but is considered separate and distinct from the generally claimed subject matter as this invention is related specifically towards a radio or wireless network using an IEEE 1349 bus) (i.e., the species). It is noted that applicant only claims the first invention, mentioned in the first part of the summary. As such, examiner notes sparse definitions provided for each of the functional units mentioned in the claims and first part of the summary of the application. Hence examiner further notes a broad interpretation is possible as applicant provides limited definitions for each functional unit. In addition, examiner notes no logical connection between the specific function units disclosed for the genus (shown in the table below) and the functional units disclosed for the species. Hence examiner notes two distinct and separate inventions. Applicant is reminded that no new subject matter may be added to the originally filed specification. As such, should applicant attempt to add additional matter not mentioned in the applicant's summary or original claims (e.g., bridge the gap between the*

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subject matter mentioned in the first part of the summary and the detailed description), examiner is requiring applicant to (1) provide the location of said additional matter as well as (2) to provide reasoning for why said additional matter is relevant to the claimed invention (and not the separate invention disclosed in the second part of applicant's summary and detailed description). Should applicant fail to do so, examiner will reject said additional matter as new subject matter. Below is the referenced functional units for the genus disclosed by applicant.

Functional Unit Name	Claim(s) Referenced	Page(s) Referenced in Specification
first interface unit	1, 8, 16, 19,22	4,6,7,9,10
second interface unit	1,8,16	4,6,7,9,10
application interface information transfer unit	16	10
application execution unit	22	12,38,82
configuration information disclosure unit	1, 8	4,6,7,9
configuration information notification unit	6,14,20,23	6,9,11,13
configuration information reception unit	7,14,15,20,23	6,9,11,12,13
configuration information correspondence memory unit	10,20	7
configuration information memory unit	23	11,12,13
communication resource notification unit	7,15	6.9
communication unit	19,22	11,12
communication terminal function disclosure unit	19	11
communication resource information reception unit	21,24	11,12,13
communication resource information memory unit	21,24	12,13
communication resource information transfer unit	22, 24	12,13
connection unit	19,22	not found
detection unit	3,10,17	4,8,10
message identifier correspondence memory unit	3,11,17	5,8
message identifier attaching unit	11,17	5,8
node constituent element information addition unit	5,13	5,8
node constituent information deletion unit	5,13	5,8
packet input/output unit	16	10
recognition unit	1	4,5,6,7,8,10
resource acquisition unit	4,12,18	5,8,10
resource information correspondence memory unit	4,12,18	5,8,10
routing unit	3,10,11,17	5,7,8,10
sub constituent elements	2	4
sub unit information reception unit	19	11

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*Finally, examiner would like to further point out that all base or independent claims proposed by applicant are apparatus type claims. Hence upon review of the application, examiner found no method type claims. As such, examiner cautions applicant when making the any future amendments to the claims with respect to adding new subject matter or placing an additional burden upon the examiner.*

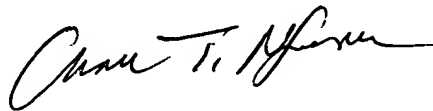
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (703) 305-4225. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (703) 308-5340. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 305-3900.

Derrick W. Ferris  
Examiner  
Art Unit 2663

DWF   
August 21, 2002



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